

## CLAIMS:

1. A method of determining an optimum set of write parameters for a laser device for writing to an optical storage medium, the method comprising:
  - defining a test region of the optical storage medium;
  - using a laser device having an operating set of write parameters, writing a predetermined data pattern to the test region;
  - measuring jitter values for the predetermined data pattern; and
  - selecting an optimum operating set of write parameters of the laser device for writing data to the optical storage medium in dependence upon the measured jitter values, the optimum set of write parameters minimizing the jitter value for the optical storage medium,
- 10 characterized in that the step of writing a predetermined data pattern to the test region comprises the steps of:
  - writing a reference data pattern using a reference set of write parameters of the laser device to the test region; and
  - writing a measurement data pattern using a measurement set of write parameters of the laser device to the test region.
2. A method as claimed in claim 1, wherein each set of write parameters includes a power level of the laser device.
- 20 3. A method as claimed in claim 2, wherein the power level of the laser device varies over the writing of the measurement data pattern.
4. A method as claimed in claim 3, wherein the power level of the laser device rises from a minimum level to a maximum level over the writing of the measurement data pattern.
- 25 5. A method as claimed in claim 4, wherein the power level of the laser device rises in discrete steps over the writing of the measurement data pattern.

6. A method as claimed in any one of claims 2 to 5, wherein the power level of the laser device over the writing of the reference data pattern is fixed.

7 A method as claimed in claim 1 or 2, wherein the measured jitter values relate  
5 to an average of jitter values of the measurement and reference data patterns.

8 A method as claimed in claim 1 or 2, wherein the optical medium is a disc,  
and wherein the reference and measurement data patterns form an alternating pattern on a  
single track of the disc.

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9. A method as claimed in claim 1 or 2, wherein the optical medium is a disc,  
and wherein the reference and measurement data patterns are written on consecutive tracks of  
the disc.

15 10. A method as claimed in claim 1 or 2, wherein the optical medium is a disc,  
and wherein the reference and measurement data patterns are written on neighbouring tracks  
of the disc.

20 11. Apparatus for determining an optimum power level for a laser device for  
writing to an optical storage medium (1) having a test region defined thereon, the apparatus  
comprising:

25 an optical writing device (12) operable to write a predetermined data pattern  
(2,3) to a test region of an optical medium (1) using an operating set of write parameters;  
a measurement device (14) operable to measure jitter values for a  
predetermined data pattern (2,3) on an optical medium (1); and  
a power controller (10) operable to select an optimum operating set of write  
parameters of the laser device (12) for writing data to the optical storage medium (1) in  
dependence upon measured jitter values, the optimum set of write parameters minimizing the  
jitter value for the optical storage medium (1),

30 characterized in that the optical writing is operable to:  
write a reference data pattern using a reference set of write parameters to the  
test region; and  
write a measurement data pattern using a measurement set of write parameters  
to the test region.

12. Apparatus as claimed in claim 11, wherein each set of write parameters includes a power level of the laser device.

5 13. Apparatus as claimed in claim 12, wherein the optical writing device (14) is operable to vary the power level of the laser device during writing of the measurement data pattern.

10 14. Apparatus as claimed in claim 13, wherein the power level of the laser device rises from a minimum level to a maximum level over the writing of the measurement data pattern.

15 15. Apparatus as claimed in claim 14, wherein the power level of the laser device rises in discrete steps.

16. Apparatus as claimed in any one of the claims 12 to 15, wherein the power level of the laser device over the writing of the reference data pattern is fixed.

20 17. Apparatus as claimed in claim 11 or 12, wherein the measured jitter values relate to an average of jitter values of the measurement and reference data patterns.

18. Apparatus as claimed in claim 11 or 12, wherein the optical medium is a disc, and wherein the reference and measurement data patterns form an alternating pattern on a single track of the disc.

25 19. Apparatus as claimed in claim 11 or 12, wherein the optical medium is a disc, and wherein the reference and measurement data patterns form are written on consecutive tracks of the disc.

30 20. Apparatus as claimed in claim 11 or 12, wherein the optical medium is a disc, and wherein the reference and measurement data patterns are written on neighboring tracks of the disc.